SCIENCE ADVISORY BOARD

ADVISORY COMMITTEE ACTIVITY SUMMARIES

AUGUST 1997 - DECEMBER 1997

Contents:	
1.2 Committee Operations Staff	, ,
2.1 Clean Air Scientific Advisory Committee (CASAC) 2.2 Advisory Council on Clean Air Compliance Analysis (Council) 2.3 Drinking Water Committee (DWC) 2.4 Ecological Processes and Effects Committee (EPEC) 2.5 Environmental Health Committee (EHC) 2.6 Environmental Economics Advisory Committee (EEAC) 2.7 Environmental Engineering Committee (EEC) 2.8 Integrated Human Exposure Committee (IHEC) 2.9 Radiation Advisory Committee (RAC) 2.10 Research Strategies Advisory Committee (RSAC)	EC Summary - Page 4 EC Summary - Page 4 EC Summary - Page 5 EC Summary - Page 6 EC Summary - Page 7 EC Summary - Page 7 EC Summary - Page 8 EC Summary - Page 8 EC Summary - Page 9 EC Summary - Page 11 EC Summary - Page 11

Prepared for the Jan 13-14, 1998 Executive Committee Meeting

by the

Committee Operations Staff

of the

Science Advisory Board

1. ADVISORY COMMITTEE OPERATIONS

1.1 Overview

This document was prepared by the Committee Operations Staff (COS) to summarize recent activities of the Standing and various *ad hoc* Committees of the Board. The summaries are designed to supplement discussions at the Jan 13-14, 1998 meeting of the Board's Executive Committee. This document includes a listing of COS Staff, a list of SAB reports (full and letter size) issued since October 1, 1997, a listing of reports that are presently in progress, and committee summaries that cover the period since the last Executive Committee meeting (July 23-24, 1997).

1.2 Committee Operations Staff (with Committee assignments noted)

<u>Team Leader</u>: Bob Flaak (CASAC, RSAC & STAA)

<u>Designated Federal Officials</u>: Stephanie Sanzone (EPEC), Kathleen Conway (EEC), Roslyn Edson and Sam Rondberg (IHEC & EHC), Tom Miller (DWC, EEAC & IRP) and Jack Kooyoomjian (RAC & Council). Additional support is provided by Don Barnes (EC), Jack Fowle (EC-Goals) and Ann Barton (EC-Lookout).

Meeting Planners: Wanda Fields (EPEC & IRP), Dorothy Clark (EEC, RSAC & CASAC), Diana Pozun (RAC, Council & EEAC) and Mary Winston (EHC, IHEC & DWC). Additional support is provided by Priscilla Tillery-Gadsen and Betty Fortune (EC, EC-Goals and EC-Lookout).

1.3 Reports Issued this Fiscal Year (in chronological order)

- a) SAB Review of the Draft Mercury Study Report to Congress, EC Subcommittee, October 10, 1997
- b) SAB FY1997 Annual Staff Report, November 1, 1997
- Notification of a Consultation on Alternative Approaches for Disposal of Federal Low-Activity Radioactive Waste, Radiation Advisory Committee, November 20, 1997
- d) Review of the EPA's Draft Ecological Research Strategy, Ecological Processes and Effects Committee, December 22, 1997

1.4 Reports in Progress

Full Reports:

- a) Indoor Air Source Ranking Database (IHEC Roslyn Edson) Before EC as an expedited review.
- b) Marsh Management (EPEC Stephanie Sanzone/Roslyn Edson) Reviewed and approved at the January 15-16, 1997 Executive Committee meeting. Awaiting final edits by Vettors.
- c) Surface Impoundments Survey (EEC Kathleen Conway) Revised draft is undergoing edits. Due to EC in April.

- d) Pollution Prevention (EEC Kathleen Conway) Report is under review. Due to EC for February teleconference.
- e) Toxic Release Inventory (EEC Kathleen Conway) Report is under revision after being returned by the EC. Due to EC for February teleconference.
- f) Waste Research Strategy (EEC Kathleen Conway) Approved by EC on 12/18. Undergoing final edits.

Letter Reports:

a) Prospective Emissions Estimates (Council - Jack Kooyoomjian) - *Draft under development by Chair. Does not require EC approval.*

Advisories:

a) ERAMS (RAC - Jack Kooyoomjian) - *Draft under development. Due to EC in April.*

Commentaries:

a) Importance of Indoor Air Environments (IHEC - Roslyn Edson) - *Draft under development by Chair and DFO. Due to EC for February teleconference.*

1.5 Staff Contact Information

For further information concerning any committee or its activities, please contact the relevant staff as noted in Section 1.2 on page 1. Phone numbers are as follows (area code 202 for all numbers):

Don Barnes	260-4126	Priscilla Tillery-Gadsen	260-8414
Jack Fowle	260-8325	Mary Winston	260-8414
Robert Flaak	260-5133	Dorothy Clark	260-8414
Sam Rondberg	260-2559	Diana Pozun	260-8414
Roslyn Edson	260-3823	Wanda Fields	260-8414
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2. ADVISORY COMMITTEE SUMMARIES

2.1 Clean Air Scientific Advisory Committee (CASAC)

a) Background

The Clean Air Scientific Advisory Committee (CASAC) has a statutorily mandated responsibility (under the 1977 and 1990 Clean Air Act Amendments) to review and offer scientific and technical advice to the Administrator on the air quality criteria and regulatory documents which form the basis for the national ambient air quality standards (NAAQS). NAAQS have been established for lead, particulate matter (PM), ozone and other photochemical oxidants, carbon monoxide (CO), nitrogen oxides (NOx) and sulfur oxides (SOx). This process normally includes review of the Office of Research and Development's (ORD) Air Quality Criteria Document (CD) for a given NAAQS, followed by a review of the Office of Air and Radiation's (OAR) Staff Paper (SP) for that NAAQS. The Criteria Document contains all the relevant scientific and technical information on the pollutant, while the Staff Paper is the bridge between the science in the criteria document and the policy decision that has to be made by the EPA Administrator. Sometimes the Committee reviews the regulatory proposal for a NAAQS prior to its promulgation. The Committee also offers research recommendations on a periodic basis, normally following its review of a particular NAAQS. The Committee is presently closing out its review cycle for Nox and Ozone (meetings to discuss research recommendations for these two NAAQS have yet to take place) and has just begun the review cycle for CO. The last review cycle for the PM NAAQS was completed in FY97, with the next cycle beginning in mid-FY98.

b) Issues of Interest

- Issue 1: Particulate Matter (PM₁₀) NAAQS The CASAC completed its last review cycle on the PM NAAQS in FY97. During this year, the Committee will begin its next review cycle on PM. A meeting is planned for early spring to discuss the Criteria Document Development Plan.
- <u>Issue 2:</u> Ozone NAAQS The CASAC will meet in FY98 to discuss research needs for ozone. This is the next step in the NAAQS review cycle for CASAC after completing the review of the Staff Paper. This meeting has not been scheduled.
- <u>Issue 3:</u> <u>Diesel Health Assessment</u> The Committee initially reviewed this ORD document in May 1995. In the Committee's judgment, the document was not scientifically adequate for making regulatory decisions concerning the use of diesel powered engines. The Committee forwarded a letter report to the Agency in August 1995. The CASAC is planning to review a revised Diesel Health Assessment in FY98.
- Issue 4: Carbon Monoxide (CO) NAAQS The CO Development Plan (prepared by ORD) came before the Committee on December 15, 1997. This is the first step in the next five-year review cycle for the CO NAAQS.

Reports Issued - None.

Meetings Planned:

- 1) Mid FY98 Diesel Health Assessment Document
- 2) Mid FY98 Ozone Research Needs
- 3) Mid FY98 PM Development Plan

2.2 Advisory Council on Clean Air Compliance Analysis (Council)

a) Recent Activities

There were no Council meetings since the last SAB Executive Committee (EC) meeting July 23 & 24, 1997. Prior to that date, the Council and its Air Quality Models Subcommittee (AQMS) have met three times via public teleconferences to conduct their business (the Council's AQMS met on May 5, 1997, and the Council met on May 15 and June 30, 1997).

b) Future Activities

NOTE: Prospective Study review packages containing unique and similar draft documents, memos, and analyses were received by the SAB Staff on January 5, 1998 for distribution and review by the AQMS, the HEES and the Council. In each case, the Agency has provided the following charge:

- 1) Are the input data used for each component of the analysis sufficiently valid and reliable for the intended purpose?
- 2) Are the models, and the methodologies they employ, used for each component of the analysis sufficiently valid and reliable for the intended analytical purpose?, and
- 3) If the answers to either of the two questions above is negative, what specific alternative assumptions, data or methodologies does the Council recommend the Agency consider using for the first Prospective Study analysis?

Air Quality Models Subcommittee (AQMS):

Dr. Paulette Middleton is Chair of the AQMS, succeeding Dr. George Wolff. This Subcommittee of the Council plans to meet January 22 & 23, 1998 to review the Prospective Study modeling and emissions estimates issues with respect to the above charge.

Health and Ecological Effects Subcommittee (HEES, the old Physical Effects Review Subcommittee PERS) Role in Review of the CAA Section 812 Prospective Study:

Dr. Paul Lioy is Chair of the HEES, succeeding Dr. Morton Lippmann. Dr. Rick Freeman continues as Vice-Chair of the HEES. This Subcommittee of the Council has just become engaged in review of the CAA Section 812 Prospective Study, and plans to meet on January 29 and 30, 1998 to review the Prospective Study health and ecological effects issues with respect to the above charge. There are a number of issues still requiring resolution for the Prospective Study. For instance, one is how the ecological endpoints will be evaluated, whether such data will in fact be generated by the Agency in the future, and how the Agency might approach the ecological issues. This particular issue might require briefings by the Agency program office staff (OAR & OPPE, along with the SAB & the Council) to the Deputy Administrator, the AA ORD, etc.

The Council:

The Council plans to meet February 5 & 6, 1998 in a face-to-face meeting, following the HEES and the AQMS face-to-face meeting cluster (AQMS - Jan 22 & 23, 1998; HEES - Jan. 29 & 30, 1998) for a coordinated series of meetings to address the above-stated charge on the Prospective Study. Based on the earlier series of meetings, the Council has prepared an internal review draft advisory to the Administrator on this topic, as of December 16, 1997. The Council may send a revised version of this draft advisory forward to the Administrator, or use it for refinements after the series of coordinated meetings in January and February, 1998.

2.3 Drinking Water Committee (DWC)

a) Recent Activities

The Drinking Water Committee met in Washington, DC on December 4 and 5, 1997. Presentations centered on the framework for Office of Water responses to the Safe Drinking Water Act Amendments of 1996 and how that will influence the DWC's interactions with the Agency in the coming years. The Office of Water has a busy agenda extending through 2002 as it responds to SDWA 1996. The overwhelming desire of Office of Water personnel was to interact frequently with the DWC during the development of various technical documents via briefings and consultations so that the Committee advice can be obtained well in advance of the SDWA-required SAB review of OW products at the proposal stage. The DWC agrees that this is a good approach to follow in making sure that the Agency receives the greatest value from Committee advice on OW technical efforts. Office of Research and Development personnel and the International Life Sciences Institute also briefed the DWC on their research activities that will provide valuable information to OW for use in meeting SDWA requirements.

The DWC discussed two possible proactive projects that might fit the intent of the SAB Executive Committee as developed at its recent retreat. One project would involve an exploration of how science is incorporated into regulatory negotiations and other stake holder interactions. The Office of Water has been among the most proactive of EPA offices in participatory interactions with stakeholders. The Microbial/Disinfection Byproducts interaction would provide a good subject for developing a case study of how science is used in such participatory activities. Another area ripe for exploration is the emphasis on source waters in the 1996 amendments to SDWA. The DWC suggests that a study of how to construct more meaningful watershed indicators, as they relate to safe drinking water (as contrasted with ambient water quality), could be another area for consideration as a proactive project for the Board.

b) Future Activities

The Drinking Water Committee has tentatively scheduled the following dates for meetings with the Agency:

March 12-13, 1998 July 13-14, 1998 December 7-8, 1998.

2.4 Ecological Processes and Effects Committee (EPEC)

a) Recent Activities

Although no EPEC meetings have been held since the last Executive Committee meeting, the Committee closed out Fiscal Year 1997 by completing a number of reports and advisories. The following reports have been transmitted to the Administrator since the last EC meeting:

- 1) Advisory on the Problem Formulation Phase of EPA's Watershed Ecological Risk Assessment Case Studies (EPA-SAB-EPEC-ADV-97-001)
- 2) Notice of Consultation on a Proposal to Develop a Sediment Quality Criterion for PAH Mixtures (EPA-SAB-EPEC-CON-97-001)

- 3) Evaluation of Superfund Ecotox Threshold Benchmark Values for Water and Sediment (EPA-SAB-EPEC-LTR-97-009)
- 4) Review of the Environmental Monitoring and Assessment Program (EMAP) Research Strategy and Research Plan (EPA-SAB-EPEC-97-009);
- 5) Advisory on the Development of Phase II of the Index of Watershed Indicators (EPA-SAB-EPEC-ADV-97-003)
- 6) Review of the EPA's Draft Ecological Research Strategy (EPA-SAB-EPEC-LTR-98-001)
- 7) Advisory on the Need to Develop Ecological Risk Management Guidelines (EPA-SAB-EPEC-ADV-97-002)

New Members Appointed - The Committee welcomes three new members: Drs. Taub, Acevedo, & Alvarez-Cohen, and bids thanks and farewell to Drs. Dale, Pfaender, & Schubel.

b) Future Activities

In response to a request from EPA Region I, the Committee plans to review the Blackstone River Initiative, a regional risk assessment initiative that includes basin-wide assessment (both monitoring and modeling) of a river/tributary system that feeds into Narragansett Bay. The review is tentatively scheduled for March 24-26.

In addition, several members of EPEC will participate on a special EC subcommittee to review the D-CORMIX model used to predict water quality associated with continuous dredged material discharge.

2.5 Environmental Health Committee (EHC)

- a) Recent Activities The Committee's report on the review of the Carcinogen Risk Assessment Guidelines was approved by the Executive Committee and forwarded to the Administrator. The newly, appointed EHC members are: Dr. David Hoel, a Professor of Biochemistry and Epidemiology at the Medical University of South Carolina; Dr. John Doull, a Professor Emeritus in the Department of Pharmacology, Toxicology and Therapeutics at the University of Kansas Medical Center; and Dr. Cynthia Bearer, an Assistant Professor in the Division of Neonatology and the Department of Neurosciences at Case Western Reserve University.
- **b)** Future Activities Future EHC meetings for FY 98 are expected to address: a) the application of the Cancer Guidelines to a review of Atrazine; b) a technical analysis of the Lead 403 Rule; c) ORD's *Guidelines for Health Risk Assessment of Chemical Mixtures*; and d) test guidelines for chronic inhalation toxicity and carcinogenicity of fibrous particles.

2.6 Environmental Economics Advisory Committee (EEAC)

The Environmental Economics Advisory Committee (EEAC) is completing its report to the Integrated Risk Project (IRP) Steering Committee as a result of the comments made during the September Steering Committee meeting.

The Deputy Administrator, working with EPA staff and the new Chairman of the EEAC, has prepared a draft mission statement for the EEAC. This draft mission statement will be considered by the EEAC at its next meeting. The Committee Chairman and Science Advisory Board staff are meeting with various Agency officials to develop its agenda for action in the next year. The results of this series of discussions will be used to schedule the next EEAC meeting as quickly as possible.

2.7 Environmental Engineering Committee (EEC)

a) Recent Activities

The Environmental Engineering Committee last met June 30-July 3, at the National Risk Management Research Laboratory. Since then, the EEC has focused its energies on completing reports of reviews conducted. The following reports have been approved by the Executive Committee:

- 1. Review of the Superfund Innovative Technology Evaluation (SITE) Program
- 2. To Filter, or Not to Filter; That is the Question, September 5, 1997
- 3. An SAB Review: Review of the Sector Facility Indexing Project
- 4. Review of the National Risk Management Research Laboratory,
- 5. Review of the Waste Research Strategy

The EEC has also worked on three other reports that it plans to submit to the EC this winter:

- 1. Review of the Pollution Prevention Research Strategy
- 2. Toxic Release Inventory-Environmental Indicators Project
- 3. Surface Impoundments.

b) Future Activities

The Environmental Engineering Committee has scheduled a meeting February 5-6. The EEC plans to undertake the following activities in FY98:

- 1. A retrospective study
- 2. A review of the EPA's Quality Management Program
- 3. Preparation of short discussion papers for possible EEC initiatives
- 4. A review of several EPA Brownfields activities

2.8 Integrated Human Exposure Committee (IHEC)

a) Recent Activities - The Committee met on July 21-22, 1997 to address two topics: the Office of Air and Radiation's (OAR) Indoor Air Strategy (a consultation), and the Office of Pesticides and Toxic Substance's Indoor Air Source Ranking Database (full review). The draft report on the Source Ranking Database was forwarded to the Executive Committee on December 22, 1997 and will be reviewed under the expedited review process.

Dr. Henry Anderson, the Chief Medical Officer for the Wisconsin Bureau of Public Health, has been appointed as the new IHEC Chair. The newly appointed members are: Dr. Michael Lebowitz, a Professor of Medicine and Epidemiology at the University of Arizona Health Sciences Center; and Dr. Charles Weschler, a Program Manager at Bell Communications Research.

b) Future Activities - Future IHEC meetings for FY 98 are expected to address: a) ORD's Acute Reference Exposure (ARE) Methods Documents and b) ORD's revised *Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry* document.

2.9 Radiation Advisory Committee (RAC)

a) Recent Activities

<u>Issue 1: Highlights of Recent Accomplishments:</u>

By the time the Executive Committee meets on January 13 & 14, 1998, the RAC and its Subcommittees will have held two public meetings and one technical editing work session since the last Executive Committee meeting of July 23 & 24, 1997, and submitted a full report and notice of a consultation to the Administrator. The technical editing work session planned for January 9, 1998 is a teleconference discussion of a sub-group of the Uncertainty in Radiogenic Risk Subcommittee (URRS). The RAC's Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) Review Subcommittee (MARSSIMRS) met in a public teleconference on July 21, 1997 just prior to the SAB Executive Committee (EC) meeting of July 23 & 24, 1997 to achieve closure on its draft report on MARSSIM, dated July 9, 1997. The final report (EPA-SAB-RAC-97-008) was submitted to the Administrator on September 30, 1997 after vetting by the SAB EC. The consultation on disposal of Federal low activity radioactive wastes was conducted on November 18, 1997, and a notice of this consultation (EPA-SAB-RAC-CON-98-001) was sent to the Administrator on November 20, 1997. Each meeting is described below.

Issue 2: The RAC Meeting of November 18 & 19, 1997:

The RAC conducted a public meeting on November 18 & 19, 1997 to plan the Fiscal Year 1998 review activities, to begin review of the Environmental Radiation Ambient Monitoring System (ERAMS) II Advisory, and to conduct a consultation on disposal of Federal low activity radioactive wastes. The RAC had earlier conducted an advisory review of ERAMS on July 13 and 14, 1995 (EPA-SAB-RAC-ADV-96-003, dated April 5, 1996), and ERAMS II is the logical extension of this review which looks at a new and comprehensively reconfigured ERAMS, as a follow-up activity (SAB Project # 96-015). The charge questions focused on the following issues and questions:

- 1) whether the proposed reconfigured ERAMS could meet the system's basic objectives more effectively and efficiently,
- 2) whether the criteria used for matrix selection, determination of sampling locations and sampling frequency and other network features are sufficient, or are there other criteria that should be considered.
- 3) will the proposed changes increase the data's usefulness to governmental agencies, the scientific community and the public?, and
- 4) are there any other interpretation issues and/or practices that should be addressed?

The first internal draft advisory was circulated to the RAC for comments and revision on January 5, 1998.

Issue 3: RAC/URRS Meeting of November 20, 1997:

The RAC's Uncertainty in Radiogenic Risk Subcommittee conducted its first public meeting on November 20, 1997 to review the Agency's draft Addendum to the 1994 report

entitled "Estimating Radiogenic Cancer Risks," which incorporates the uncertainty analyses for the dose and risk calculations. The RAC's URRS was asked to answer the charge questions as follows: 1)Are the relevant major sources of uncertainties addressed?, 2) Is the overall approach to quantifying and combining uncertainties appropriate?, and 3) Are the mathematical functions used to characterize the various sources of uncertainty reasonable, in view of available scientific information?

b) Future Activities

<u>Issue 4: Future RAC Meetings:</u> The anticipated topics to be reviewed are segmented by season and discussed below.

<u>Winter/Spring Meetings:</u> At this RAC meeting, which is currently scheduled for March 3, 1998, it is anticipated that the RAC will have at least one item, namely the RAC will seek closure on the ERAMS II Advisory. In addition, the RAC may receive a complementary briefing on Identifying High Radon Geographic Areas. The second Uncertainty in Radiogenic Risk Subcommittee (URRS) public meeting is currently scheduled to take place on March 4, 1998.

Summer Meeting: It is anticipated that the summer meeting of the RAC will take place on July 21, 22, and 23. If the meeting can be handled in two days, then July 21 & 22 are the preferred dates. It is expected that a consultation to revise the Naturally-Occurring Radioactive Material (NORM) Draft Scoping Document and reflect on the appropriate application of the study of NORM by the National Academy of Sciences (NAS) may take place at this meeting or the Fall meeting. Also, a Program Office review of the revised cancer risks from indoor radon exposure based on the Biological Effects of Ionizing Radiation (BEIR) VI is scheduled to be ready in July, 1998, and will likely generate two related but separate documents to be reviewed by the RAC. The first document is a white paper proposing revisions to the Agency's methodology for estimating lung cancer risks from inhalation exposure to indoor radon in light of the BEIR VI report and any other relevant information. The Office of Radiation and Indoor Air (ORIA) has requested an advisory review of this white paper. A radon risk assessment will then be developed, if necessary, based upon the results of this white paper. The revised radon risk assessment will be the second document developed, for which ORIA anticipates requesting a review from the RAC. The current projections on the timing of the review of this second document are prior to the end of the 1998 calendar year. Additionally, it is anticipated that ORIA will plan to conduct a courtesy briefing on the draft Multi-Agency Radiation Laboratory Analytical Protocols (MARLAP). MARLAP is an Inter-Agency document which is being developed, and at this stage, it is not certain what the exact timing or role of the SAB's RAC will be in relation to this document. The RAC may also discuss possible review topics and ORIA's development of proposed project sheets for Fiscal Year 1999 at this meeting.

<u>Fall Meeting 1998:</u> The planned dates for this RAC activity are November 17, 18 and 19, 1998. ORIA anticipates that it will be completing its revised radon risk assessment and will request a review for this meeting (see above discussion). The consultation with the RAC on its planned revisions to the NORM report will be conducted at this meeting, if the NAS report is not available on time for ORIA to prepare for the November meeting.

Other topics may be discussed at future meetings, such as a briefing on Federal Guidance 13 (Update to Federal Guidance 12) to upgrade approaches for radiological risk assessments, a presentation on environmental indicators for indoor air issues, an update on the Inter-Agency Steering Committee on Radiation Standards (ISCORS) activities (the group that recommended that the SAB/RAC review MARSSIM, and they deal with other radiation issues which have Inter-Agency implications, an introduction to ORIA's program on waste management, continued discussion and update on ORIA's radon activities, and courtesy follow up discussions

and updates on other SAB initiatives by SAB DFOs, such as the Integrated Risk Project, Futures II (the G-7 Project), and others by the SAB.

2.10 Research Strategies Advisory Committee (RSAC)

The broad objectives of RSAC are defined in its mission statement. Its principal focus will be to advise the Agency on its process for developing research priorities and planning to support those priorities in terms of expertise, infrastructure, and budget. In addition, with the recent creation of the Board of Scientific Councillors (BOSC) within ORD, there is discussion underway to define the areas that RSAC and BOSC will cover.

RSAC met on Dec. 16, 1997 to receive briefings on the ORD budget process and on ORD's strategic planning activities. No reports have been issued since the last Executive Committee meeting and no reports are in progress. Planned meetings: a review of the ORD Budget on Feb. 26-27 and a consultation on ORD Strategic Planning Process on May 21-22.

2.11 Integrated Risk Project (IRP)

Since its September meeting, the Integrated Risk Project Steering Committee and Subcommittees have been working to complete their report to the Agency on the results of its efforts. Two reports are being prepared. One is a short version that discusses the main findings and recommendations from the overall Integrated Risk Project. The other is a long version that provides both the results of each Subcommittee's activities in separate chapters (human health risk, ecological risk, economic assessment, valuation of natural resources, and options analysis and selection) and a series of chapters that describe and explain the integration concept developed during Steering Committee deliberations (introduction, framework for integrated decision-making, making integrated environmental decisions, and performance evaluation). The Steering Committee charged the Subcommittee Chairs with completing each of the Subcommittee chapters. The Steering Committee also established a five-person writing group to prepare a draft of the short report for full Steering Committee review and approval. Both reports are to be delivered to the SAB Executive Committee to begin peer review in April 1998.

On December 8, 1997, members of the IRP team presented information on the integrated environmental decision making concept and the results of the five Subcommittee's activities at the annual meeting of the Society for Risk Analysis (SRA) in Washington, DC.

2.12 Scientific and Technological Achievement Awards Subcommittee (STAA)

The Subcommittee report was approved at the July 1997 EC meeting and was transmitted to the Administrator on August 1, 1997. The Subcommittee reviewed and evaluated 135 nominations (including over 200 scientific and technical papers) in seven categories for the 1996 STAA awards. The Subcommittee recommended 53 nominations (39 percent of the nominations) for awards at three levels and also recommended that seven additional papers be recognized with Honorable Mention.

The Subcommittee will receive the 106 award nominations for 1997 in January with a review meeting planned for March or April 1998. This reduction in the number of nominations (106 vs. 135) is due in part to our tightening of the nomination procedures.

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